

THE

# MEDICAL AND SURGICAL REPORTER.

WHOLE SERIES, }  
NO. 240.

PHILADELPHIA, MAY 25, 1861.

{ NEW SERIES,  
VOL. VI. NO. 3.

## ORIGINAL DEPARTMENT.

### COMMUNICATIONS.

#### **Hectic Fever: A Symptom of Pulmonary Tuberculosis; Its Diagnosis.**

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#### PART FIRST.

This is a fearful and never-failing symptom of pulmonary tuberculosis. I have never known an individual affected with this disorder who escaped it altogether. It steals upon the patient insidiously. At first, perhaps, in the morning he feels chilly; in the afternoon he complains of being too warm; in the evening, on till the turn of the night, his hands and feet are dry and burning; after this, until morning, he perspires. But, as the pulmonary lesion progresses, the paroxysms of fever become more severe, and its different stages more pronounced.

The most peculiar characteristics of this fever, as it occurs in phthisis, are to be found in the state of the pulse and the perspiration. The pulse is small, hard, and tense, jerking, quick, and very frequent, from one hundred and twenty to one hundred and forty, and even more. The perspiration is usually out of all proportion to the other stages of the fever. It also seems to have some important connection with the patient's sleep; it very seldom comes on while he is awake, but, after sleeping, he awakes and finds that he is sweating. The perspiration is generally most copious upon the chest and head; sometimes it is moderate, amounting to a slight and pleasant moisture of the skin; at others it is profuse, and the patient is perfectly drenched.

Such profuse perspiration usually belongs to the latter stage of phthisis, and is often very

distressing to the patient, making him even dread to go to sleep. It, also, tends to a rapid exhaustion of the vital powers, and it indicates, when very copious, that the course of the disease will be of short duration: for it has been observed that the perspiration generally keeps pace with the febrile excitement, and this with the rapidity of the pulmonary lesion. It has also been observed that any temporary cause which will increase the fever will likewise increase the night sweats. Chills are not always present in hectic fever; frequently they are wanting, and the patient may be ignorant of any excitement, although there is profuse perspiration at night.

During the febrile excitement, the countenance of the patient almost always becomes animated, the eye brightens, and, in an individual of delicate complexion, the fine blush of excitement gives a new beauty to the features. After the night is past, and the sweating stage is over, the pale cheek and the languid expression point again more clearly to the internal ravages of the fatal malady. Sometimes there is in the last stage of the disease a circumscribed redness on one or both cheeks, and, when it becomes permanent, it is regarded as the harbinger of speedy dissolution. The poet has truly said:

"But, ah! the flush upon my cheek,  
That showed like health's first bloom,  
Was Death's own color—he had decked  
His victim for the tomb."

Hectic fever, however, as a diagnostic mark of pulmonary tuberculosis, must be taken with some caution, for it is frequently an attendant upon other diseases—such as bronchitis, when it has been of long standing, and pulmonary abscesses, which result from simple inflammation; and, indeed, we meet with it in all the various suppurative inflammations of the abdomen, pelvis, and in some chronic disease, which do not terminate in suppuration, but in obstruction and induration. Nearly all chronic

engorgements of the liver, mesenteric glands, and pancreas are attended with symptoms of hectic fever. And some authors have contended that hectic fever may occur *idiopathically*. We have yet to be convinced of this. We have never yet met with a case of this kind. We have always been able to find an adequate cause for its existence in some special physiological or pathological condition of the system.

Several years since, a case was submitted to my examination, which had been pronounced idiopathic hectic fever by two respectable physicians. The case turned out to be one of diabetes. Although the urine was but little augmented in quantity, yet the deposit of saccharine matter was very abundant, indeed the urine was loaded with it, and his constitution was suffering from it to that degree that he had two distinct paroxysms of hectic during twenty-four hours. He was entirely relieved by a nutritious diet, composed mostly of roasted beef, bread, and butter, with one of the following pills, taken three times a day, two hours after the regular meal:

R.—Bromide potass, - - grs. xxx.  
Ext. St. Ignatius bean, - grs. x.  
Ext. of napplewort, - - 3j. M.  
Divide into 30 pills.

When a person has but a very few tubercular deposits in the lungs, which are still in their crude state, he will not have hectic fever. But let him take a severe cold, and have acute pneumonia, or any other inflammatory disorder of the chest, hectic will soon supervene. Its marked presence under such circumstances is a very suspicious indication, and we should look very carefully for some of the other signs and symptoms of the fell disease, for it is only in this way that hectic can be of any value as a means of diagnosis.

Dr. S. Dickson, in his "Elements of Medicine," maintains that the principal feature of hectic fever, as it manifests itself in phthisis, is the state of the patient's mind. "This," he remarks, "as a general thing, is never depressed; he retains his cheerfulness and activity, and is fond of dwelling upon bright pictures of days to come, which hope can present to his imagination. Such is indeed the fact, while the digestive system preserves unimpaired its comfortable sensations and elastic tone, a state of things most frequently the case where the pulmonary organs have borne the weight of the attack.

"But should the febrile excitement have arisen from original disorder of the digestive system, or should the stomach become deranged during the progress of the case, under these circumstances a far different set of feelings will have possession of the patient; his tongue is furred and pale, his pulse soft, his appetite variable or deficient, and he will be languid and gloomy, hopeless and spiritless.

"I regard this connection between the state of the chylopoietic viscera and the mental condition of the patient as so constant and regular, that I will venture to propose it as a diagnostic in all doubtful cases, and will declare that I never hesitate to consider the digestive system as disordered to an important degree, either primarily or sympathetically, whenever I meet with anxiety of mind or a disposition to gloom and melancholy.

"We can thus distinguish, in an infinite majority of cases, what W. Philip calls digestive phthisis from true pulmonary tuberculosis, and hepatic from pulmonary diseases in general."

I can endorse these views of Dr. Dickson most cheerfully. They are in perfect accordance with my own observation. Indeed, I am not acquainted with any chronic disorder in which the hopefulness and buoyancy of the spirits are so remarkable as in pulmonary tuberculosis. In some cases, there appears to be an unusual brilliancy of the mind and cheerfulness of the disposition. Thus we frequently see that the least improvement in the symptoms is at once hailed as the harbinger of returning health, while their aggravation is attempted to be reasoned away by many trivial circumstances, which are as baseless as the fabric of a dream.

It is sometimes exceedingly difficult to determine whether the trifling manner in which phthisical patients speak of their symptoms and condition is to be regarded as an effort to conceal a fatal truth, or the result of real indifference to their state. About two years since, I attended a young physician who fell a victim to this disease. There was a predisposition to the malady in the family; some of the younger members had already died with it. When I intimated to the family that he had phthisis, they were greatly alarmed, and their anxiety almost without bounds; but the patient did not appear to be the least excited by his condition, and throughout the whole course of his disease he appeared cheerful and happy; and, when

interrogated in relation to his health, he was always better and would be well in a few days. A few days before his death, I told him that he was laboring under a hallucination—that his disorder would soon terminate his life. "Oh, no," said he, "dear doctor, I know I can't recover; I knew it from the beginning; but for the sake of saving my friends any unnecessary amount of alarm and anxiety on my account, I have braved the storm of dissolving nature, and am now prepared to die." And when the last hour came he closed his eyes upon all the scenes of earth,

"Like one who wraps the drapery of his couch about him,  
And lies down to pleasant dreams."

#### PART SECOND.

The hectic of phthisis is sometimes taken for intermittent fever, or fever and ague. This is common in sections of the country where the latter disorder prevails. This is owing to the fact, that when ague becomes chronic its various stages are so modified in their features as very much to resemble hectic fever. The cough and expectoration which accompany ague is another circumstance that may mislead the physician, and may be the means of his committing a very grave error in his diagnosis. I have, on several occasions, met with cases of this description, and, as their diagnosis is not always very easily made out, we will occupy the remainder of this number in citing two or three instances:

April 7, 1859. Called this morning to see Mr. A., aged twenty-nine; just returned from Fort Wayne, Indiana, where he has been residing for the last year. He has always enjoyed good health until four months since, when he had a very severe attack of chills and fever. He had but two paroxysms, when it was checked by quinia. In twenty-one days from the last paroxysm he had a relapse. This time it was not so severe; the chills, fever, and sweating were all much lighter. Quinia was again prescribed, but it did not, as on the former occasion, entirely relieve the paroxysms. The chills and fever became very erratic; some days he would have fever and sweating without chills; then again he would have a severe rigor, with but very little fever and no sweating. Sometimes he would have a paroxysm every day for several days in succession; then he would have a respite for a day or two, when they would return as before.

During this time his appetite has been uni-

formly good, has rested well at night, and has been able to attend to his business when not laboring under the fever. He now has slight cough and mucous expectoration. Pulse in the sitting posture ninety-five, and respiration twenty; mouth and throat hot and dry; tongue clean, but very red, particularly at the edges; Thompson's gingival margin very clearly defined; bowels regular; urine very high-colored and scanty; mind cheerful. For three days the chills have come on quite early in the morning, and by one o'clock the entire paroxysm would be completed, and the afternoon and night have been comfortably passed. During the cold stage he complains of weight and heaviness in the chest, with a slight increase of the cough and expectoration.

On a careful examination of the chest, the following physical signs were elicited: The expansion of the two sides were equal; on percussion, little or no dullness was discovered on either side; on auscultation, the prolonged expiratory murmur was distinctly elicited, immediately under the right clavicle; the respiratory sounds of the left side were normal; the heart sounds, however, attracted my attention more than the pulmonary. These were loud and distinct, particularly the bellows sound. The impulse of the heart was distinctly felt over the whole chest, and each pulsation was attended by a distinct jirk.

From the absence of any enlargement of the liver and the spleen, and any serious pulmonary symptoms, we were almost ready to conclude that our patient was laboring under heart disease, complicated with fever and ague. But the presence of Thompson's gingival margin, the state of the patient's mind, the rapidity of the pulse during the interval between the paroxysms, and the erratic character of the fever, lead to a different conclusion. The case was set down as one of incipient tuberculosis, and treated accordingly.

During the summer there was a temporary improvement. For three months we fondly hoped that he would regain his health; but, about the first of October, he commenced gradually to decline, and, by degrees, more grave symptoms supervened. Hæmoptysis, purulent expectoration, copious night-sweats, diarrhoea, and occasional attacks of pleurisy terminated his earthly career on the 17th of January, 1860.

Post-mortem, twenty-four hours after death, revealed the following condition of the lungs

and their surroundings: Several broad, long, and thick adhesions at the apex of the right lung, with considerable effusion of serum in the pleura. The upper lobe of this lung was quite indurated, having several vomica at its summit, all communicating with the bronchia. The most of them were not much larger than a pea, while only three of them were as large as a common-sized marble. None of their parietes were lined by false membrane, but were formed of a semi-opaque substance, of a yellowish aspect, quite firm and tenacious. In the middle lobe quite a number of tubercular deposits were found, in various stages of softening, but no excavations. The inferior lobe was very much congested, but presented no marks of tubercular infiltration. The left lung was but little affected. The bronchial mucous membrane was very much congested, and ulceration was found in several places on the right side. The heart was somewhat larger than natural, but its appearance was normal. There was slight thickening of the semilunar valves of the aorta; in other respects it was healthy. The bowels were not examined.

In reflecting over this case, it is very evident that the patient, in the first instance, had intermittent fever. This may be inferred from his residing in a section of country where that disease is very prevalent, and also from the paroxysms of fever being promptly checked by the use of quinia. The attack that supervened three weeks afterward was not intermittent fever. The erratic character of the paroxysms and its not yielding to the free use of quinia or any other antiperiodic was sufficient proof of this. The malarial poisoning probably had some influence in developing the hectic symptoms, and in giving them such a prominence that they constituted the distinguishing symptoms of the subsequent pulmonary lesion, for he suffered more from hectic than anything else. It was present at the commencement of the malady, and continued until the last. During his temporary improvement there was a short respite from its annoyance, but when he relapsed, it became more distressing than ever, especially the night-sweats, which were so copious that he had to change his night-dress two or three times during the night. This was, however, not until the latter period of his disease. In the first instance the sweating was mostly in the afternoon, directly after the chills and fever. At this early period the disease might easily have been taken, and was, for intermit-

tent fever, for there was but one physical sign, and that not very marked, to point out the existence of pulmonary tuberculosis. Hectic fever was the paramount symptom of this case, and served to point out with unerring certainty the existence of a great constitutional malady which was so soon to develop itself in the lungs, and there work out its disorganizing and destructive agency, sapping the very fountain of life, and consigning its helpless victim to a premature grave.

The next case that I would introduce is that of Ann B. I was called to attend her in the fall of 1858. Her parents had both died with phthisis, and at a very tender age she had been left to the care of a maiden aunt, who watched over her with more than a mother's solicitude. She was a delicate child, and every thing that a scientific physician could suggest to strengthen the vital forces and overcome the proclivity to phthisis was rigidly enforced, and, at the age of sixteen, she had the appearance of an individual who enjoyed good health.

About this time she was sent to one of our large and fashionable female seminaries. Being very anxious to improve her mental powers and keep up with her classes, she applied herself most diligently to her studies. Thus overtaxing her brain, taking but little exercise, living on a scanty diet, and imitating some of her school-mates in the barbarous habit of tight-lacing, she soon laid the foundation for ill health, and the subsequent development of pulmonary tuberculosis.

The first time I saw her professionally was on the eighth of October. Three months previous to this date she commenced to have chills in the morning, which was followed by fever in the afternoon; sometimes she would have pain in the back and limbs, attended with thirst and loss of appetite. She also had cough and expectoration, particularly in the morning. By degrees the chills and fever became so severe that she was obliged to relinquish her studies and to call in a physician. After a very hasty examination, he pronounced her disease intermittent fever, and said she would be well in a few days.

Here is his first prescription:

R.—Sulph. quinia,	-	-	grs. xxx.
Extract cinchona,	-	-	ʒi.
			M.

Make 30 pills, of which take one every six hours.

This prescription was continued for six days



without any improvement, when the following was substituted:

R.—Sulph. quinia,	-	-	grs. xxv.
Acid sulphuric dilut.,	-	-	gtt. xxx.
Brandy,	-	-	f℥iii.

M.

Make Solution.—Dose, a teaspoonful every four hours.

While using this prescription the paroxysms became somewhat relieved, and she was enabled to resume her studies in part, but still they never entirely left her, although she was under the influence of antiperiodic medicine the whole time, the doctor still maintaining that her disease was nothing but fever and ague. After struggling along in this way for six or seven weeks, she was compelled to relinquish her studies and return to the residence of her aunt.

My first visit was early in the morning. She informed me that she had passed a very restless night. In the lying posture her pulse was one hundred and five per minute and her respiration twenty-five. Tongue clean, but quite red at the edges and centre. Thompson's gingival margin very distinct upon the gums. Appetite poor and bowels very much relaxed. Complaints of dyspnœa when the chills and fever are on, and for the last two weeks has had copious night-sweats. Cough and expectoration no ways troublesome.

The physical signs are very pronounced. The two sides of the chest are quite unequal in their expansive movements, the left being almost motionless. Percussion yields dullness over one-third of the left side, from the summit of the lung downward. Humid clicking is distinctly heard just under the clavicle. On the right side the resonance of the chest is normal; the only abnormal sound heard is prolonged expiratory murmur and slight mucous ronchus.

The diagnosis was clear: tubercular induration and softening in the superior lobe of the left lung, and latent tubercular matter in the right. The prognosis, as a matter of course, was unfavorable. I attended her with the understanding that she could not recover. This is a sad office, but it is one from which I never shrink. I feel a chastened and holy pleasure in administering to the wants of one who is standing, as it were, on the verge of the better land. That silent chamber and that death-couch are the gateway to immortality and eternal life. And as I have felt the last throb of the pulse, and listened to the last breath,

and beheld the last flash of the eye, it has subdued the pride of my heart, enkindled the sympathies of my mind, and inspired my soul to seek more after Him who is the resurrection and the life.

The course of my patient's disease was painless, with the exception of the distress which the hectic fever occasioned. She lingered a long time on the borders of the grave; but, when the time arrived for her to depart, she entered into her rest as sweetly as an infant falls to sleep in the arms of its mother. And, as we gazed upon her mild and placid countenance, beautiful even in death, we were lead to exclaim, in the language of the Revelator:—"Blessed are the dead which die in the Lord from henceforth! Yea, saith the Spirit, that they may rest from their labors; and their works do follow them."

The reader must pardon this seeming rhapsody; but such thoughts are so intimately connected with this malady that it is very difficult to escape them, and that physician who has not been impressed by them must have a heart that does not beat in sympathy with his kind, and a mind that cannot appreciate the sublimity and glory of the Christian's faith and the Christian's hope.

Dr. Thompson, in his lectures on pulmonary consumption, has the following remarks on this subject: "Am I passing beyond becoming bounds in suggesting the reflection that while witnessing such transitions from languor and decay into an undying life, we may ourselves realize the truth that death is not the end of existence; that it is something grander than human skill defeated; that, when art can do no more, and 'friends weep at the vestibule as the spirit passes out of doors,' we may win glimpses of brighter scenes, where the cares and the passions of this lower life shall cease to engross, and the germs of opening science shall expand into the fullness of infinite Truth."

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*Poisoned Rivers.*—Three rivers at Aberyswith have, during the last few years, been wholly poisoned by some lead mines draining into these streams. Cows, horses, and pigs are poisoned by eating the grass on the banks of these rivers, which flood the surrounding land. What is poisonous here to animals would be so also to man. And this is a subject which may be elsewhere worth the attention of medical officers. The metallic contamination of rivers is a subject which has not been very carefully studied.—*Lancet.*

**Rheumatism.**

By B. WOODWARD, M.D.,  
Of Galesburg, Illinois.

It is a hazardous task for any man, particularly an obscure individual, to advance views on medical subjects not in accordance with those of the profession generally; and he who undertakes it throws himself open to criticism and it may be to ridicule. There are some diseases, however, the accepted pathology of which rests mainly upon hypotheses, for, from their very nature, they cannot be settled either by pathological anatomy or chemistry. Of these, rheumatism is a remarkable example. True, anatomical pathology has shown which were some of the lesions, and chemistry some of the products found after death; but no investigations have, as yet, proved what was the cause or even in what tissues of the body the disease had its origin. The pathology being obscure, it necessarily follows that the treatment has remained an unsettled question. So unsettled is its pathology, that authors have contented themselves with suppositions on the subject. Theories have been invented as to the influence of this, that, or the other acid in the system; again, an excess of fibrine in the blood has been alleged to be the cause. So various are the opinions that it would be a matter of impossibility for a student to make out, from "the books," what is its pathology. Every theory of pathology has its corresponding treatment. Has it been inflammatory? The whole range of antiphlogistic treatment has been exhausted. Was it an acid? Eliminatives, catalytics, chemical agents, which should neutralize it, have been resorted to. Or, did it depend upon an abnormal quantity of fibrine? Bleeding, antimonials, and the use of mercury were recommended, in order to overcome this condition of the blood. Others, again, have considered the disease as nervous, at least in a degree, and the treatment has corresponded. I do not deny the presence of the acids or the increased quantity of fibrine found in the blood, but that they are the cause of the disease does not satisfy me. Having for the past fifteen years had a great many cases of rheumatism to treat, I have, with the deepest earnestness and patience, sought to ascertain its nature, but it is only within the past four years that my mind has become at all settled on the subject, and since I have adopted my treatment to my view of the pathology I

have not had cause to regret it. Observation and my own course of reasoning have led me to the adoption of the hypothesis, that *all constitutional diseases, in which swelling, pain, or convulsions are prominent symptoms, are of purely nervous origin, and point unmistakably to a derangement of the nervous system as a whole, or in some of its more important parts.*

The nerves, so far as we know, are the only tissue in the body capable of suffering or transmitting pain; when it is manifested in other parts, as in muscle, bone, or fascia, it is only from the ramifications of nerve-fibre to these parts. This view does not exclude those lesions or affections of the nervous centres which are marked by paralysis, in which no pain exists, and unless the derangements are such as to produce paralysis, there is always pain or convulsion or both where there is nervous derangement. I shall only endeavor, in the present paper, to establish this view, so far as rheumatism is concerned.

It is not easy to conceive of a constitutional disease, caused by a depravation of either solids or fluids of the body, without at least functional lesion, and, hardly, without organic. Yet we do find this to be the case in diseases of the nerves, as in neuralgia, in which pain and sometimes increased action of the circulatory system are the only abnormal conditions. This condition also obtains in the majority of cases of rheumatism in the early stages, and until the nervous derangement has produced other abnormal actions.

Those who contend for the acid theory, or the abnormal amount of fibrine in the blood, as the cause of rheumatism, acknowledge that both the one or the other are often very rapidly formed and as rapidly disappear, but they have not proved that this is not caused by nervous action itself. Without calling on any to prove a negation, we may point to analogous cases to sustain ourselves.

Hydrophobia is a nervous disease of the purest type, and one of the products of the nervous irritation is the poison in the saliva. Where there is no constitutional disease, other than a temporary derangement of the nervous system, the urine becomes loaded with abnormal products, and all are familiar with the increased secretion of saliva, mucus, and serum, as the case may be, arising from certain forms of nervous excitement, be the excitement of a healthy or unhealthy nature; and why may not an acid, or an increased quantity of fibrine,

likewise depend upon nerve-irritation in rheumatism?

We have certain forms of rheumatism in which pain, paralysis, and atrophy are the only symptoms all through the history of the case, and these following each other in regular succession and, apparently, dependent on each other. In the history of the following case I shall be excused if I give the name of the lady who was the victim to this disease. So well was the case known, and so deep the sympathy that was felt for her, that an apology is not needed for giving her case.

In the summer of 1839, Mrs. L. M. Jones, of Abbeville, Medina county, Ohio, had an acute attack of rheumatism in one ankle, from getting her feet wet. Pain was the only symptom. Soon the knee of the same limb became affected, then the other limb suffered, and so the case went on, joint after joint and limb after limb becoming involved, till the vertebral column was also involved. Soon atrophy of the muscles and rigidity of the joints supervened, till the muscles were mere cords, and she lay as rigid as a marble statue, without the power to move one joint in the body, but the victim of constant excruciating pain. Thus she lay twelve years, when death released her. Through all this, there was neither redness or swelling of any part. Her breathing and voice were unaffected, and her appetite and digestion as perfect as in health, and her mind as clear and vigorous. Where, in such a case as this, shall we look for evidence of disease but in the nervous system? She was treated by good and judicious physicians for "rheumatism," but what was the rheumatism but nerve-irritation? Blind as I then was to what I now believe to be the pathology of the case, I could give no hope of relief. Surely if we do not learn from our errors we are poor students of medicine. There is one form of so-called rheumatism which, if it do not depend upon nervous irritation, I do not know where to place it. I allude to rheumatism in a member after there has been fracture of a bone. This form is well known to every one who has treated many fractures, particularly of the femur and humerus, and we have often found it one of the most common and troublesome of the sequelæ; and, also, that it yields most readily to the action of the neurotic remedies.

Read carefully Dr. Louis Bauer's paper in *REPORTER* for April 20, entitled "Contributions to the Pathology of the Spinal Cord and

its investing Membranes," and see if the cases there given (more especially *Case 4*) of rheumatism, so called, do not point, without a shadow of variation, to the nervous system as the cause of the malady! and yet the case had been called "rheumatism," and, in the hands of a less experienced pathologist would have been treated as such. What is "torticollis" but an affection of the nerves governing the sternocleido mastoideus, and do we not find, on analyzing, almost every case of so-called "rheumatism" that we have to deal with a nervous affection?

*Case 2*, of the same paper, gives all the symptoms of rheumatism, and yet when skillfully diagnosed the rheumatism vanishes, and the case yields to appropriate treatment. If rheumatism is not of nervous origin, why do we find woolen worn next to the skin to be one of the best prophylactics, and why are rubefacients so valuable? On the hypothesis that it is disease of the nerves, the usefulness of the treatment is easily explained, from the action on and through the cutaneous nerves. It may be urged that swelling of the parts, effusion, etc., militates against the view that the affection is nervous; but to my own mind it has no weight. Disease of the nerves does not and need not imply that the affection is uniform either in its nature or manifestations. It may, and doubtless is, governed, in great measure, by the nature of the tissue in which it appears, and also by the condition of the patient at the time of the attack. In one case it may result in atrophy of a part, while in another hypertrophy takes place.

There is no fact in physiology better established than that the nutrition of muscles is governed by nerve action, as well as their motion and sensibility. Irritation of nerve tissue may as well cause swelling and effusion as paralysis of a nerve cause atrophy and wasting of muscles or other tissue. The cutaneous nerves are readily affected by causes acting from the surface, and it is not improbable that the disease in question is often produced by external irritation, as by cold or wet. This view does not necessarily imply that the disease must be confined to the cutaneous nerves, for the nervous system is so much a unit that, if one part, even on the surface, is affected, the deeper seated may quickly become involved.

The irritation occasioned by a slight wound of a fibre of nerve in a distant part may induce tetanus, which is a disease of the nerve centres.

Neuralgia, or painful disease of the nerves, as generally understood, is marked by pain of a peculiar character, and different from that of rheumatism; but this is no evidence that the rheumatism does not arise from nerve causes, for the same tissues are subject to different forms of disease. It is not possible, in the present state of our knowledge, to say what the peculiar condition of the nerves is, either in the one or the other disease, but pathologists may yet unravel the mystery. This, however, will not be done till we have found the right end of the skein.

If, together with the nature of nervous affections generally, and the nature of the pain in rheumatism, we couple the evidence derived from therapeutics, it seems to me that we have as nearly-conclusive evidence, as the nature of the case will admit of, that all rheumatism is of a neurotic character; it may be from transient causes, or it may depend upon a diathesis. In the one case it will be acute, and yield more readily to treatment; while in the other it will be chronic, and difficult, if not impossible, to eradicate. We read of various kinds of rheumatism, and, among them, of the nervous; but the chief differences are made to depend upon the location. If it were an acid, or any other depravation of the blood, why is it not general instead of local? why does it change its place of attack? and why does it depend so much upon climatic and atmospheric causes for its return from time to time?

This paper is not intended to be declaratory, but suggestive, and these views are thrown out for examination. What, then, is the testimony of therapeutics? It may be given in a few words. Combine the testimony of all the best authors, and it is that "that class of remedies which act upon and through the nervous system are more to be relied on than any other, and sooner overcome the disease."

This has been my own experience—limited, I allow. For the past four years I have relied upon the use of neurotics, galvanism, over and through the track of the affected nerves, galvanopuncture, and hypodermic injections of the narcotics. Some cases require the use of arterial sedatives, among which I give the first place to veratrum viride; others will be anemic, requiring iron and a sustaining treatment; while others will be malarious or intermittent, requiring quinia and strychnia, but through the whole category, keeping in mind that it is a disease of the nerves, and not of the blood,

both in its origin and progress. From what I have tested of this treatment, I am confident that few cases of acute rheumatism will be found obstinate, while the old chronic cases will be more easily managed than by any other mode of which I have any knowledge. I have found either one or the other of the following formulæ of great advantage where the large joints are implicated:

R.—Chloroform,	-	-	-	f ʒj.
Extr. conii. fld.,	-	-	-	f ʒij.
Glycerine,	-	-	-	f ʒj.
				M.

R.—Chloroform,				
Ext. conii. fld.,	-	-	-	aa f ʒj.
Morphia,	-	-	-	gr. x.
Glycerine,	-	-	-	f ʒss.
				M.

Either of these can be used by saturating lint with them and covering the whole joint, and cover the lint with oil-silk.

In chronic cases, especially of the hip or shoulder, I like the hypodermic injections of aconita or morphia into the cellular tissue, as near the trunk of the nerve as possible.

### Hints and Observations on Military Hygiene, relating to Diet, Dress, Exercise, Exposure, and the Best Means of Preventing and Curing Medical and Surgical Diseases in the Army.

By A HOSPITAL SURGEON OF PHILADELPHIA.

#### SECTION I.

Believing it to be the duty of every one to do all in his power to aid the Government in the present crisis, I have collected from the best sources within my reach such facts and observations as have been found useful both in this country and in Europe, regarding the sanitary management of troops in and out of camp, so as to keep the soldiers in good health, and by the most efficient means to relieve disease, both medical and surgical. By publishing it in a public journal, and distributing it freely, I trust I will be contributing my mite to the general good.

The great importance of sanitary regulations are shown by the following facts:

In the first seven months of the Crimean campaign, the mortality among the troops was at the rate of 60 per cent. per annum from disease alone—a rate of mortality which exceeded that of the great plague among the population



of London. The number of sick and wounded soldiers received into the hospitals at Scutari was about 41,000, and the number of British soldiers who died in those hospitals during the residence of Miss Nightingale, was 4,600. The causes were; exposure, bad food, deficient clothing, fatigue, damp, bad drainage, bad ventilation, overcrowding, nuisances, organic effluvia, malaria. The diseases were: diarrhoea, dysentery, rheumatism, frost-bite, scurvy, typhus, typhoid, and remittent fevers, and cholera. Typhus fever attacked both sick and well in the hospital. During the month of November, 1854, alone, there were 80 recorded cases of hospital gangrene. Out of 44 secondary amputations of the lower extremities, 36 died. The mortality of hospitals can be compared in two ways, which mutually check and confirm each other. *First*, by dividing the deaths by the mean "strength" of the sick in the hospital, and reducing the mortality to that which would obtain, if the time of observation were a year. *Second*, by dividing the number of deaths by the number of cases treated.

What the commander of the forces and the war department want and ought to know about the health of an army is: 1. How long the army will last at the then rate of mortality. 2. Whether the diseases are preventable from which the mortality arises. 3. What proportion of the army is inefficient from sickness. A health officer should be attached to the Quartermaster's department, and have full power to attend: 1. To the draining of sites; 2. To sewerage; 3. To the cleansing of outskirts; 4. To the ventilation; 5. To the water supply; 6. To the lime-washing and cleanliness of the buildings; 7. To the allotment of cubic space; 8. To the sanitary conduct of burials. The personal hygiene of the patients must be left to the medical officers.

Before and after the works executed by the sanitary commissioners begun in 1855, the hospitals at Scutari bore a similar sanitary relation to that of the gaols of the last century, which were pest-houses, compared with Colonel Sibb's prisons in 1857, the most healthy buildings in existence. Such a sanitary commissioner will be, I trust, appointed by the Secretary of War of the United States.

#### DISEASES OF THE ARMY—CAUSES OF DISEASES.

The most frequent causes of diseases in armies are the sensible changes in the air, either from heat to cold, or from dryness to moisture.

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Soldiers in camp, according to Dr. Rush, suffer much from heat, by being constantly exposed to the sun, either without any shade at all, or only covered by a thin tent; and where the air is so much confined that the heat is often more insupportable than without, in the sun. This circumstance, joined with the damps so incident to camp life, seems to explain why the summer and autumnal diseases of an army, even in a northern latitude, resemble so much the epidemics of southern countries, especially of those with a moist air.

It has been found that great heat alone is insufficient to cause much sickness without the accompanying condition of moisture, as the neighborhood of marshes.

*Cold* is much oftener the immediate cause of diseases in the army, either alone or, especially, where attended with moisture.

*Moisture*.—Soldiers are much exposed to dampness in their tents, where the air can never be thoroughly dry, in consequence of the constant exhalation going on, to which is often added the moisture caused by rains, even where the site of the camp is dry or properly drained. Where there is deep water, the locality is not so dangerous to troops as marshy grounds, or meadows that have been once flooded, and but lately drained; there are situations, too, which, though dry in appearance, may yet be moist by reason of the transpiration of subterraneous water; such grounds are apt to produce bilious fever. Stagnant, moist air in low and woody countries is apt to produce fevers, especially when the men have to lie upon the wet ground.

*Of the General Means of Preventing Diseases in the Army*.—To prevent diseases arising from heat and cold, to avoid the effects of intense heat, commanders should direct that the marches should be early in the morning, or after the intense heat of the day is over. Soldiers suffer less from sleeping in the open air (when the ground is dry) than in tents.

The preservatives from cold consist in clothing, bedding, and fuel. Under-shirts and woolen over-shirts, with or without vests; over-coats, strong shoes, with blankets for each tent, and cloaks for the cavalry should be provided. There should always be sufficient fuel to dress their food, and correct the dampness of their barracks, though the troops should trust rather to warm clothing and exercise than to fire for preventing diseases arising from cold:

*To Prevent Diseases arising from Moisture.*—Let the quartermasters examine very carefully every barrack and refuse house, with cellars containing water, or which have been uninhabited. Attention should also be paid to their being aired and well ventilated.

In the field, the best security is by making trenches around the tents, by which means the natural moisture of the ground is lessened, and the rain-water is intercepted and carried off without wetting the straw. The soldiers should be allowed plenty of straw, and have it frequently renewed, or, when it cannot be obtained every few days, it should be taken out and well aired. Without this precaution, it will not only grow damp, but soon rot and prove unwholesome. The tents should be thoroughly ventilated daily; if not, it will cause everything to become moist and unhealthy. Oil-cloths spread upon the ground of the tent, and kept dry, intercept much of the rising vapor. Mattresses should not be laid upon the ground.

Soldiers unavoidably exposed to rain on marches and out-duty should be allowed to make a fire with wood in the rear of the camp. Where the grounds are dry, camps are most healthful on the banks of large rivers, because, in the hot season, those situations have the advantage of fresh air from the water to carry off both the moist and putrid exhalations.

*To Prevent Diseases arising from Impure Air.*—With regard to the impure air of marshes and other stagnating water, if it is necessary to continue long upon such ground, the best expedient will be to make frequent removes, for, by shifting, the straw will be changed, the men will have more exercise, and the impure animal matter will be left behind, which, in camps, is particularly noxious. As to the cantonments in marshy ground, if the troops must remain there in the dangerous season, it will be better to float the fields entirely than to leave them half dry.

Dr. Rush remarks that the certainty of its good effects is evinced by those low countries in the United States, which are sickly in ordinary seasons, being uncommonly healthy in those seasons in which the low or marshy grounds are covered by an unusual quantity of rain.

In order to preserve purity of air in dysenteric seasons, let there be some slight penalty for neglecting to use the privies, and from the middle of July, or upon appearance of a spread-

ing dysentery, let the privies be made deeper than usual, and once a day a thick layer of earth with lime thrown into them. It may also be proper to order the pits to be made either in the front or rear, as the reigning wind of the season may best carry off their effluvia from the camp. When the dysentery begins to be frequent, the sick should not be sent to one common hospital, at least not in such numbers as may vitiate the air.

Barns and granaries make good summer hospitals. Dr. Rush testifies, from experience, to the advantages of barns for military summer hospitals, in preference to any other buildings. Churches, in common with barns, owe their advantages for military hospitals to the height of their ceilings. The latter are cooler than churches, from having no windows in them, and currents of air are conveyed through them more directly and more easily to the bunks of the sick. Another point to be observed in a fixed camp is to have the regimental hospitals scattered, and not crowded into one village. It may be proper to make the following distinction:

In the first part of a campaign, when inflammatory distempers prevail, those who are taken ill are to be left behind, as such cases least admit of motion, and at the same time are not infectious. But those who fall ill from the end of summer to the decline of autumn, will bear motion, and generally mend upon a change of air, or rather to be carried with their regiments and dispersed, than collected into one place to breed and propagate the infection. Dr. Rush considers that these remarks should be qualified. It is true, he observes, that soldiers ill with the hospital-fever are generally benefited by being gently removed in wagons in *warm* weather, but great mortality uniformly followed the removal of such patients in *cool* or *cold* weather, in the same vehicles, in the Revolutionary war of the United States.

As to the disposition of hospitals, with regard to preserving the purity of the air, the best rule is to admit so few patients into each ward, that any one unacquainted with the danger of bad air might imagine there was room to take in double or triple the number.

This Dr. Rush considers an excellent rule, which should be carefully attended to by physicians who have charge of military hospitals. The neglect of it deprived the United States of several thousand soldiers during the Revolutionary war.

In winter hospitals, chimneys (with open fire-places) only should be used, and stoves never; for though the latter may warm a large ward better and at less expense, yet by scarcely making any draught of air they will be apt to promote its corruption, whereas a fire in a chimney acts like a constant ventilator. Dr. Rush remarks that a strict regard ought to be had to this direction. Dr. Tilton combined warmth and ventilation very happily in the log military hospitals constructed by him in Morris county, New Jersey, by making the fires in a hollow in the centre of the hospitals, and leaving an opening in the roof in a perpendicular direction to them, through which the smoke was discharged. The bunks surrounded the fire-place. After kindling the fire the patient suffered no inconvenience from the smoke. Their short and transient sufferings from this cause were overbalanced by its salutary effects, for it has been proved by Dr. Clark in his treatise upon the diseases incident to long sea-voyages, that smoke checks the propagation of fever from morbid exhalations.

*To Prevent Diseases arising from Improper Diet.*—No order will be able to restrain soldiers from eating and drinking what they like, if they have money to purchase it. Therefore a fundamental rule, and, indeed, almost all that is necessary, is to oblige the men to eat in messes, by which means we may be assured the best part of their pay will be bestowed on wholesome food.

This method being established, it only remains to take care that the men be supplied with good bread and fresh vegetables during the hot weather.

Vinegar with molasses, or a small portion of claret, or even New England rum, is one of the useful drinks during the heat of summer, mixed with water. Fresh mutton and beef are useful articles broiled, but fresh pork is injurious, while good salted pork or ham was found by Dr. Rush to be a preservative of the health of the Revolutionary army of the United States.

The chief rule in diet in sickly times is to eat moderately, avoiding surfeits and indigestion.

*To Prevent Diseases arising from Errors in Exercise.*—The greatest fatigue which a soldier undergoes is in making long marches, especially in hot or rainy weather. When the service requires it such hardships must be endured, but they will be attended with less sickness if care

be taken to supply good provisions and plenty of dry straw. At other times when dispatch is not necessary, short marches, before the heat of the day, with proper halts, are so far from harrassing the troops, that nothing can be more conducive to the preservation of their health. In fixed camps, as there is always more sickness from inactivity than from fatigue, it would not be amiss to make proper regulations about the exercise at such times, as our soldiers, left to themselves, are naturally too indolent to use what is fit for them. The exercise of a soldier may be considered under three heads: the first relates to his duty; the second to his living more commodiously, and the third to his diversions.

The first, consisting chiefly in the exercise of his arms, will be no less the means of preserving his health than of making him expert in his duty; and frequent returns of this, early and before the sun grows hot, will be more advantageous than repeating it seldom and continuing it too long, for a camp affording little convenience for refreshment, all unnecessary fatigue is to be avoided.

As to the second article, cutting boughs for shading their tents, making trenches around them for carrying off the water, airing the straw, cleaning their clothes and accoutrements, and assisting in the business of the mess, are all things which, as they must be strictly executed by orders, ought to be no disagreeable exercise to the men for some part of the day.

Lastly, as to diversions, since nothing of that sort can be enforced by order, the men must be encouraged to them, either by the example of their officers or by small premiums, but caution is necessary with regard to excess, especially in hot weather, for nothing is more prejudicial to the soldier, when heated with work (or amusement) than to strip, expose himself to the cool air, and greedily drink cold water, and especially well-water, which commonly is very cold; river water is less hurtful, as the rays of the sun, to which it is constantly exposed, prevent its being so cold.

Neatness cannot be too much insisted on. Let the soldiers frequently wash their hands, their faces, and their feet, and if the season permit, let them bathe as much as possible in running water.

*The Seasons Compared with Regard to the Health of an Army.*—In the beginning of every cam-

paign we are to expect, for the first month at least, that the returns will be considerably higher than if the men had remained in quarters.

After the first fortnight or three weeks of the encampment, the sickness daily decreases, as the most infirm are already in the hospital, the rest more hardened as the weather is growing daily warmer.

This healthy state continues throughout the summer, (that is until the middle of August,) unless, by some extraordinary exposure to rain, the men get wet clothes or lie wet, in which case, in proportion to the preceding heat, the dysentery will be more or less frequent until October, with more or less intermittent and remittent fevers, which continue until the frosts begin.

Winter expeditions, though severe in appearance, are attended with little sickness, if the men have good clothing, shoes, quarters, fuel, and provisions.

Dr. Rush states that the American Revolutionary war furnished a memorable instance of the truth of this remark. Among nearly two thousand Philadelphia militia troops, whom General Cadwalader commanded on the Delaware in the winter of 1776 and '77, and to whom Dr. Rush acted as Physician-General, there was but one death, and not more than half a dozen sick in the course of six weeks, notwithstanding the greatest part of them slept in tents, or in the open air before fires, or upon barn or kitchen floors, during the whole of that time.

(To be continued.)

## Illustrations of Hospital Practice.

### PENNSYLVANIA HOSPITAL.

#### MEDICAL CLINIC.

Service of Dr. Levick.

May 18, 1861.

#### CARDIAC DROPSY WITH COINCIDENT DISEASE OF THE LIVER AND ASCITES.

This patient is forty-five years of age. He has had several occupations, having formerly been a seaman, but more lately has kept a drinking-house. He was admitted to the hospital on the 16th inst., suffering from dyspnoea, swelling of the lower extremities, and with marked ascites or abdominal dropsy. He gives the following history of himself: That he had

good health until seventeen weeks ago, at which time he was seized with severe pain and swelling in the left shoulder, with much fever, the pain extending down to the front of his chest. Although the pain was greatest in this joint, it was not entirely confined to it but affected some of the other joints. By this illness he was confined to his bed for six weeks. When he got about again he resumed his place in the bar-room, and confesses that he indulged freely in the use of spirits. He cannot tell how much he drank daily, but says he was in the habit of taking a little with each of his friends and customers.

Soon after this he noticed swelling of the calves of his legs, later of his thighs, and quite recently there has been a steady but rapid enlargement of the abdomen, which measures 38 inches in circumference. There is marked prominence of the superficial veins of the abdomen, and the abdomen is dull on percussion over most of its surface. There is also a little puffiness under the eyes, and the conjunctivae are of a decided yellow tinge.

The pulse is feeble. Over the heart there is an increased space of percussion dullness, and at the apex of the heart there is a rough blowing sound, which extends even to its base and along the sternum. You cannot fail to notice an unusual degree of movement in the vessels of the neck, which is due to pulsation in the jugular veins, the cause of which I shall refer to hereafter.

The patient next presented is a sailor, aged thirty-eight, who was admitted May 15. His history is as follows: For the most part his health was good until three months ago. Previous to this he had occasionally suffered from some shortness of breath. Although often exposed to wet and cold, he has never been laid up with rheumatism. He confesses to have been at times very intemperate, drinking freely of spirits. After a debauch, six weeks ago, he noticed that his legs were much swollen, later his thighs, and very recently with him, as with the former case, there has been rapid effusion into the cavity of the abdomen. Measuring this just above the umbilicus, we find its circumference to be 36 inches. This man suffers much more from dyspnoea than the former, but in neither of them is there that condition known as orthopnoea, which would prevent them from assuming the recumbent position. Applying the ear to the region of the heart, there is heard most distinctly, at its apex, a harsh, blowing sound, distinct, but not to the extent of the former case. There are also occasional dry râles heard through the chest.

As with the former patient, there is dullness over the abdomen, but there is not the same fluctuation imparted by palpation and succussion, while we can in neither case detect any enlargement of the liver.

We have in these two patients well-marked typical cases of cardiac dropsy, so called be-



cause in both the disorder of the heart has been among the first links in the chain of morbid phenomena now presented. For, as you well know, the mere effusion of serous liquid, producing the obvious phenomena of dropsy, would be of little moment, were it not a symptom and sequence of organic derangement. On a previous occasion we have had some general remarks on this subject, and need not repeat them here, but will content ourselves with following out the different stages of development of the morbid manifestations before us. Tracing these, we find in the first case presented, that the earliest inconvenience experienced by our patient was the attack of rheumatic fever, as shown by the swelling and pain in the joints of the upper extremities; that this was followed by or rather accompanied with pain in the præcordial region; that after an apparent recovery, the swelling in the legs showed itself. In other words, the attack of rheumatism developed disease of the valvular structure of the heart, either of the mitral or the aortic valves, or produced rheumatic pericarditis with effusion or adhesion, thus cramping the actions of the organ. This latter, though an occasional sequence of rheumatism, is of much less frequent occurrence than the former. As respects the coincidence of rheumatism and cardiac disease, there is much difference of opinion. Thus my senior colleague, Dr. Gerhard, contends that he can detect an endocardial murmur in every case of acute rheumatism. As you all know, he is gifted with an acuteness of hearing which few possess, and it may be that what would escape other observers is detected by him. I should say that at least two-thirds of the cases coming under my own notice have presented this complication. Thus far every case of acute rheumatism received here since my term of service commenced this year, has been found to be accompanied with endocardial murmurs. By many physicians, on the other hand, this association is much more rarely admitted.

I am disposed to think that in this case the mitral valve was the first affected. It matters little, so far as the ultimate result is concerned, whether the disorganization be in the form of deposits on the valves, causing a narrowing of the auriculo-ventricular orifice, or such disorganization as would render the mitral insufficient to close this orifice.

In the first instance, there would be an excess of blood retained in the left auricle from the difficulty in passing through the narrowed orifice; in the second, when the ventricle contracted, a portion of the blood would be sent back into the auricle, owing to the mitral being insufficient to close, completely, the opening. In either case, then, there would be an excess of blood in the left auricle. Now, let us trace the effect of this. The blood collected by the veins in all parts of the body is conveyed by the ascending and descending venæ cavæ to the

right auricle; from this it passes to the right ventricle, and, in a healthy condition of the heart, is, when the heart contracts, prevented from passing back into the auricle to any extent, by the closure of the auriculo-ventricular or tricuspid valve. It passes then by the pulmonary artery to the lungs, where it is oxygenated and conveyed by the pulmonary veins to the left auricle. In a healthy condition, it is transferred to the ventricle, and thence, the mitral valve closing accurately, is passed through the aorta to the general circulation. But we have shown that the left auricle cannot fully empty itself, in consequence of the diseased condition of the mitral valve. The capacity of the auricle being limited, the pulmonary vessels cannot empty themselves, and this blood is backed upon the lungs: hence result congestions of the lungs, dyspnoea, and the train of morbid phenomena which characterize disease of the heart. If the obstruction be but temporary, or if, as sometimes happens, some compensating influence is set up, these morbid symptoms may subside. More generally, however, they go on steadily increasing in intensity and extent. The walls of the delicate vesicular structure of the lungs, unable to bear the strain put upon them, break down, producing the condition known as emphysema, or the vessels themselves rupture, and hæmoptysis results. As the heart continues to act, a constant current of blood would be sent to the lungs from the right ventricle, but this stream meets with that already sent, and it, too, is backed into the right ventricle. The capacity of the ventricle is limited, and, as it is receiving its supply from the systemic circulation through the auricle, its cavity is unable to contain the excess of blood thus accumulated on it, and its valves may give way.

If its muscular tissue be enfeebled, it very soon yields to the distending force of this blood, and dilatation of the right side of the heart takes place. This enlargement of the cavity necessarily affects the right auriculo-ventricular orifice, and the tricuspid valve not undergoing a corresponding enlargement, becomes insufficient to close the opening. Hence, when the heart contracts, a portion of the blood in the ventricle is forced back into the auricle; in other words, *regurgitation* takes place. As we have shown, the venæ cavæ are emptying their blood into this right auricle: hence the blood thus brought finds a partially-filled auricle, and the vessels are unable to empty themselves: hence accumulations of venous blood in all parts of the body result, and the veins, distended beyond their capacity, relieve themselves by transuding the watery or liquid portion of their contents, and *dropsy* occurs. This is first noticed in the lower extremities, if the patient be on his feet, because the effect of the gravitation of an excess of blood has now to be overcome in the dependent vessels. Later, it shows itself in other parts of the

body, creeps up, as with these patients the thighs and, very generally, abdominal dropsy shows itself. With both of our patients this last may have been developed by the coöperation of two causes. The same venous congestion, which exists in the exterior vessels, may exist in those of the interior viscera. The hepatic veins emptying into the ascending cavæ, near the heart, would be among the first to be affected by this plethora, and hence congestion of the liver early occurs. This may relieve itself by hemorrhage or by serous effusion. With both these patients there is acknowledged the free use of ardent spirit, which taken, as they say they were in the habit of using it, on an empty stomach is a rapid provocative of that condition, known as cirrhosis of the liver, the necessary result of which is abdominal dropsy. Of this more will be said at a future time.

In both of the cases before you there is marked pulsation of the jugular veins, with unusual enlargement of the same. This, of course, is due to the patulous condition of the right auriculo-ventricular orifice permitting regurgitation, and the blood thus sent back to the auricle imparts the pulsation produced by the contraction of the ventricle to the blood in the auricle, the cavæ, the veins. We see it in the neck, because the large veins are there superficial, but is by no means limited to the jugulars. Although the dilatation of the right side of the heart is the most obvious proximate cause of dropsy, other changes in the tricuspid orifice may have their share in producing it. The rapidity of its development will depend on the distance of the valves first affected from the right side of the heart, and the amount of compensating influences set up in the left heart. Thus, mitral disease earlier develops it than aortic disease, while hypertrophy of the left ventricle may so compensate aortic narrowing as to be followed by little disturbance of the general circulation.

Can we remove the cause of these men's dropsy? I fear we cannot, as the organic changes are of such a nature and duration as to be but little affected by medicines. But we may afford great relief to our patients and prolong life, by coöperating with nature in removing the dropsical effusion. To accomplish this, we encourage the action of the various emunctories, the skin, the bowels, and the kidneys; which last structure, in both of our patients, appear but little affected. An occasional warm bath, the exhibition of the compound powder of jalap on alternate nights, and the free use of the acetate of potash, have been the measures resorted to thus far, and not without some apparent advantage. We have also, in the iodide of potassium, a remedy which, both as respects the organic disease and its consequences, is especially indicated.

You shall see the further results of this treatment at a future clinic.

## EDITORIAL DEPARTMENT.

### PERISCOPE.

#### MORAL INSANITY.

Dr. Thomas Mayo, in the *Medical Critic and Psychological Journal*, has the following observations on this subject:

"A state which may seem to deserve the name of Moral Insanity, as exhibiting a perversion of moral sentiments, tendencies, and perceptions, with no slight loss of self-control, must be recognized as often prominent in the early stage of mental disease, and before the intellect is palpably affected. When certain delusions, when delirium or incoherency supervene, the case obtains without question the name of insanity. While most cases begin in this way, a very palpable difference of a practical kind is made by many reasoners in nomenclature; some extending the epithet insane to all those who exhibit these moral phenomena, whether combined with intellectual perversion or not; others refusing to assign it, unless the intellectual lesion be also patent in the case. Up to this point in the history of mental affection the patient must be held, in their opinion, personally responsible for his conduct in a criminal sense; while, with those who are disposed to give moral phenomena an equal weight as pathognomonic of insanity with those of the intellect, the moral phenomena, which, with the former, are only recognized as having been insane, when an intellectual aberration has also occurred, are at once recognized as possessing an independent right to constitute a lunatic.

"Nearly allied with these views, I may mention a very important change which is wanting in the entire education of this country. Certainly, as applied to the higher classes, it assumes as its object the regulation of character contemplated only in its normal state. The ordinary vices of the young obtain correction; but of the extraordinary and eccentric or abnormal elements of defective characters the school or college is kept ostentatiously clear. That is to say, the persons laboring under them are not treated, but expelled; and yet such persons, not deserving to be called mad, form a large element of society. I will illustrate these remarks by a few cases, with the treatment which they have appeared to suggest. I was consulted, many years ago, respecting a boy who, as he emerged out of childhood, showed a strong tendency to low company, unreasonable likes and dislikes, to what may be called general recklessness of character, and deficient sympathy with others; at the age of thirteen he was sent to Rugby, and in a short time expelled from it, not roughly or depreciatingly, but as a case out of their department of education. But what was to happen next? It had clearly be-

come a case for the discriminating management of a private tutor. But the private tutor, a clergyman of course, was equally worsted. A respectable farmer was next had recourse to, as likely to gratify the boy's taste for lower company than appertained to his social position, in the most creditable, or least discreditable way. but this was turned by him to a bad account; and now sottishness and low company were closely besetting him. Consulted by his mother, I told her that the medical profession afforded to its members a larger knowledge of the human mind, than the church, the farm-house, or the public school, and that this knowledge was wanted to him who should pretend to manage her son; and I promised to look out for some young member of our profession, who would undertake to travel with her son. The plan was accepted, and it answered; that is to say, a downward progress was arrested, and the subject of it was raised to a much higher pitch of moral worth and steadiness of character, in which he has since remained. But a gentlemanlike tone of mind has never been reached by him.

"In another case of the same kind, circumstances permitted me to adopt a much bolder plan. He was a boy, aged about seventeen, who had by that time defeated almost every system of education, and had a fair chance of bringing himself to prison or the gallows, unless certain tendencies to indecency and to violence in his character either became sufficiently marked to render him irresponsible as an undoubted maniac, or could be arrested or placed within his control. This was in the year 1831. A very excellent establishment in my neighborhood, in which I believed he might obtain this wanting education, as well as the positive restraint which some recent outbreaks appeared to justify, on the plea of unsoundness, gave me the means of subjecting this youth to the firm and passionless surveillance which only an asylum, or a place conducted in some measure on the principle of an asylum, can afford. The proprietor of it was well known to me as a gentleman of excellent judgment and an amiable character.

"I took him to this establishment, in 1831, accompanied by his father and another relative, showed him at once into his apartment, and briefly told him why he was placed there, and how inflexible he would find his restraint until he should have gained habits of self-control. At the same time I pointed out to him the beautiful and wide grounds of the establishment, and the many enjoyments which he might command by conformableness. This I stated to him, in the presence of his two relatives, whom I then at once removed from the room. When I saw him about an hour afterwards, the nearest approach that he made to surprise or regret, was the expression, 'that he never was in such a lurch as this before.'

"For about a fortnight he conducted himself

extremely well. He then lost his self-command, kicked his attendant, and struck him with a bottle of medicine. On this I went over to see him. He vindicated himself with his usual ingenuity, but looked grave and somewhat frightened when I told him that, if he repeated this offence, he would be placed under mechanical restraint, not, indeed, as a punishment, but as a means of supplying his deficiency in self-control. He expresses no kindly or regretful feeling towards his relatives; but confesses the fitness of his treatment and confinement. It appears to me that he is *tranquilized* by his utter inability to resist. From this time, during his stay at the establishment, which I continued for fourteen months, no further outbreak against authority took place. He ceased to be violent, because the indulgence of his deficiency would imply risk of inconvenience to himself, without the comfort which he had formerly derived from it, in exciting the anger of his friends and giving them pain. His attempts at sophistry were thrown away upon us; his complaints of the hardship involved in the nature of the restraints imposed upon him—namely, the limitation to the grounds of an establishment, regular hours, and the constant presence of an attendant, were met by a calm affirmation that he had himself admitted the necessity of some control, and that he had surmounted every form of it. I encouraged correspondence with myself; but when any one of his letters was insolent and wayward I declined accepting the next letter until some time should have elapsed. He read much—for we supplied him with books; and I sometimes engaged him in literary conversation. Two or three times I obtained from him a tolerably well-constructed Latin lesson. This, however, was to him a school of moral rather than intellectual advancement. A sustained attempt at tuition would have supplied, under present circumstances, too many opportunities of irritation between the teacher and the scholar. The temper requisite for the reception of knowledge and the cultivation of the intellect was being formed, and could not safely have been assumed. The same consideration induced me to postpone to him the motives and sanctions of religion. It gradually became observable, both to myself and the proprietor of the asylum, that he was becoming comparatively happy. He entered freely, and with little acrimony, into conversation with us. His complaints of the injustice of his detention became formal, and assumed the character of lodging a protest rather than making a remonstrance. Sometimes he very ingeniously admitted the freedom from unhappiness which he experienced in his present state, and compared it favorably with that in which he had previously lived, always wretched himself, but occasionally enjoying the miserable comfort of making others yet more wretched. In the course of several of my interviews, I observed the valuable influence exercised upon him by

the fear of becoming irregular in mind through the indulgence of intemperate violence. The establishment itself had supplied him with a few cases in point. One young man, who had struck his father, and from that time was a wretched maniac, drew his attention.

"He generally dined alone. Occasionally, and by invitation, with Mr. N——'s family. He associated with some of the patients. He never made any attempt to escape from the place; in fact, he felt himself mastered, and submitted. After he had been about a year in this place, he exhibited a trait of character which gave us pleasure. We found that he had given ten shillings to an attendant, by whom we had reason to believe that he had not been respectfully treated. But the increasing quietness with which he adverted to and remonstrated against his detention most tended to assure us that we might soon bring it to a close.

"The time, indeed, was now arriving at which it seemed reasonable to bring to a conclusion a method of treatment, which nothing could have justified in the case to which it was applied, except the extreme importance of the principle which it embodied, and the difficulty of finding any other means of carrying that principle into effect. Toward the end of the fourteenth month of his stay, I obtained for my young friend, as a private tutor, a gentleman in whose family he should reside on leaving the establishment with three or four other private pupils; and I determined he should be removed thither by one of those relatives who had conveyed him to the establishment. At the private tutor's my young friend was considered gentlemanlike and companionable; if opposed and thwarted, showed no symptoms of his ancient violence; waywardness was discoverable occasionally, but was no longer a property which defied self-control. On leaving his tutor's, at the end of about a year, in order to commence professional studies, he dined and slept at my house, and conducted himself in a cordial and agreeable manner.

"In order that the successful issue of this case, verified as it has been by my subsequent inquiries, may not place the system under false colors, I may observe that I do not think it could have been carried out in this form but for certain points of character existing in the patient which adapted him to the treatment applied. Without possessing active courage, he had much firmness and power of endurance; and although his scanty moral principle had not given him habits of veracity, yet he possessed in a high degree the tendency to think aloud; he was naturally frank. Indeed the openness with which he would let out those thoughts, which it was most his interest to keep secret in his evil days, was in constant contrast with the perfect unfairness and disingenuousness of his arguments in support of them or in vindication of his conduct. Now,

the firmness of his character enabled him to endure what would have shocked weak minds—the name of a madhouse; while his frankness made it impossible for him to conceal his thoughts and feelings, and thus enabled both myself and the excellent proprietor of the establishment perfectly to estimate the effect of our measures on his character while they were proceeding.

"Quis tenet vultus mutantem Protea nodo?"

"In the above remarks I have endeavored to accomplish this kind of difficulty; for I have endeavored to discover means of identifying the moral phenomena of the insane state, as distinct from those which may be left to the expressive term, eccentricity. And, at the same time, I have proposed to establish certain practical relations between these states through a modified application of the same principles of treatment to both."

#### CONSERVATIVE AMPUTATIONS THROUGH THE FOOT AND ANKLE.

The probability of the occurrence to military surgeons of frequent occasions for amputations through the foot and ankle, gives the following appreciation of the operations of Syme and Pirogoff an importance at this time.

The correspondent of the *Medical Times and Gazette*, from Bonn, Switzerland, says, "that Professor Weber has recently given us a statistical comparison of the different amputations which are performed in the neighborhood of the ankle-joint, and which may be of some interest to your readers. The cases brought together have been collected from the German, English, and French Hospital Reports. As regards Syme's operation, much preparatory work to this had been done in the valuable work of Professor Günther, of Leipzig: 'Lehre von den Blutigen Operationen,' (A Treatise on Bloody Operations,) to which numerous plates are added; and there is also a well-written *thèse* on the results of Pirogoff's amputation by Dr. H. Kestner, of Strasburg, which appeared in 1857, and in which twenty-two cases have been collected. Altogether, 216 amputations have been published. Of these, 34 were made close above the malleoli, 101 according to Syme, with anterior flap, 40 according to Pirogoff, 8 below the astragalus, at first by Textor, later by Malgaigne, 21 according to Chopart. From these returns it appears that the amputation close above the malleoli and Chopart's method give the most favorable results as to mortality. In the first only three per cent. died; the amputations according to Syme and Pirogoff gave equal results, as 15 per cent. died by each of these methods. In the operation according to Baudens, 33 per cent. died, while the operation of Textor and Malgaigne, below the astragalus, shows only one death in 8 cases. This seems certainly to speak in favor of the amputation



above the malleoli, to which so many objections have been made; but, perhaps, a larger number of cases might give a different result. In the fatal cases operated upon according to Syme and Pirogoff, death was mostly due to gangrene of the heel having supervened; this is still more frequent if the flap is formed from the thin skin at the back of the foot, as is done in Bauden's operation. In Pirogoff's amputation, the number of cases in which gangrene was induced, amounted to 12, in Syme's to 20, in Bauden's to 25 per cent. Independently of this, however, the first-mentioned operations yield exceedingly favorable results; the stumps are always useful, and there is only one case known of Syme's operation in which the stump was so painful as to prevent walking; and only one case of Pirogoff's in which caries recurred, and a subsequent amputation became necessary. In this respect, the results are much more unfavorable in the amputation above the malleoli. The circular incision, even if a large cuff should be formed, is not nearly so good as the formation of a flap, especially if the latter is made posteriorly and sufficiently large. The complaint that a conical stump is generally the result of this operation, is of less moment than the continuous exulceration of the cicatrix which is apt to ensue; and in some cases it has even been necessary, in consequence of such an occurrence, to amputate the stump again. Some time ago, a patient, who was under the care of Professor Busch, of this University, and in whom both legs had been amputated close above the malleoli, was obliged to undergo amputation at the place of election on that account, which was successfully done. Amputation above the malleoli shows about 25 per cent. of unfavorable results; and the number of such is just as great after Chopart's operation; although in this town a number of successfully-performed operations, according to Chopart, have lately occurred in the practice of Professors Wutzer and Weber.

"The question, What is the cause of the drawing up of the heel? has been much discussed; and M. Szymanowsky has recently sought the reason of it in the form of the astragalus, which is narrower on the back than in front, and which is, therefore, driven forward and out of the niche between the malleoli; but the mere retraction of the tendon of Achilles does not seem to be a sufficient reason, as M. Verneuil has in several cases, in which he made an anatomical examination of the stump, found this tendon quite relaxed. The best means to prevent the drawing up of the heel, seems to be a union of the tendons of the back of the foot and the plantar flap; and in order to effect this, the latter ought to be made as large as possible, and the tendons ought to be left as long as possible.

"As the time which is required for the cure has, in many cases, some influence upon the choice of the method, and is especially to be

considered in amputations made during war, I may mention that Professor Weber has found that the cases of Syme's and Pirogoff's operation in which the cure took less than a month, were far more numerous than such of amputation above the malleoli. Of this latter and of Chopart's operation, only 27 per cent. were cured in less than a month; but of Pirogoff's and Syme's more than 40 per cent. This circumstance, of course, does not absolutely decide the question; and the most important point will always be the complete removal of all diseased and the preservation of all healthy parts—a principle the correctness of which cannot be denied by even the most conservative surgeons.

"I conclude with a few remarks upon the method of operating in Pirogoff's amputation. During the last year, a controversy took place in the columns of one of your London contemporaries, between Professor Pirrie, of Aberdeen, and Mr. Watson, as to which of them had first made this amputation without previous disarticulation of the astragalus. I believe that both these gentlemen were led to the idea of simplifying the operation independently of each other; but I may remark that before either of them, Dr. Schultze, formerly assistant to Professor Pirogoff, had, in 1854, recommended that the calcaneus should be sawn through from below, to avoid disarticulation. No doubt it is more difficult in this operation to preserve the *A. tibialis postica*, which is of the greatest importance, as the nutrition of the flap depends upon it; and I may also say that, in case the calcaneus should, contrary to what had been expected, prove to be entirely diseased, a subsequent disarticulation of the process would be attended with great difficulties; and it is always advisable that the surgeon should reserve to himself the possibility of eventually performing Syme's operation. The modification alluded to has, therefore, not met with much encouragement in Germany. Whether the tendon of Achilles ought to be cut through, and whether the sawing should be more or less oblique, must depend upon the rigidity or softness of the surrounding parts, which are often much infiltrated. If such is not the case, it is not difficult to put the sawed surfaces together; otherwise the means just alluded to must be employed. That the bones sawed through should be closely adapted to each other, is of the utmost importance for a rapid union; and this is the reason why some surgeons (for instance, Professor Langenbeck, of Berlin) have even united the bones by means of silver wires. But this is not always necessary. I hope that this communication may assist in setting aside some of the prejudices which still prevail with many surgeons in your country, regarding Syme's and Pirogoff's amputations, which have not yet been so extensively tried as they deserve."

## THE MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SATURDAY, MAY 25, 1861.

## HYGIENE OF CITY LOCOMOTION.

Our fathers walked from their homes to their places of business, and at a period not very remote they even scorned the protection of umbrellas from either sun or rain. They may have been less effeminate than we, but there are one or two other and very important items in the account. Fifty years ago our cities did not occupy anything like half the area that they now do, and the walk to and from one's place of business was not lengthy enough to necessitate any other mode of conveyance—and as to umbrellas, they are simply a comparatively modern invention. If, perchance, the merchants of those days enjoyed the luxury of a suburban residence, they had their own means of conveyance to and fro. As to the mechanic riding—the idea was preposterous—simply because the distance did not justify it, or, if it did, he had no means of conveyance. But the growth of our cities, and perchance of effeminacy, created a demand for frequent and cheap modes of conveyance between distant points, and demand creates supply. The omnibus took the field—or, rather, the paved street—some thirty years ago, and speedily became very popular as a means of conveyance. It had the elements of popularity—it was open to everybody, offered a measurably comfortable means of conveyance, and was cheap:

"And those now ride who ne'er rode before,  
And those who always rode now ride the more."

Willis has celebrated some of his omnibus adventures in song. Many of our readers, with less poetry in their composition than he, have doubtless lively recollections of many a pleasing ride in those clumsy, jolting, dirty, ill-ventilated, truly democratic vehicles—which, did our societies for preventing Cruelty to Animals do their duty, would be loaded down daily with indictments, in lieu of passengers, for their sins against both man and beast.

But times change, and we change with them. Our cities continue to expand, the number of our business men increases, and the cost of conveyance has come within the means of the artisan and the day laborer. Hence a demand

for increased speed and capacity in our modes of conveyance. Again, demand creates supply. The omnibus is voted a "slow coach" and a nuisance, and the city passenger rail-car comes in vogue. Whatever may have been done elsewhere to establish this mode of conveyance, we believe that to Philadelphia belongs the credit, if credit it be, of its general introduction, to the almost entire exclusion of the omnibus.

It is but little over three years since the first passenger rail-car began to run in this city, and now there is scarcely a point, however remote from its centers of business in any direction, that may not be reached within an hour, and this at an expense of only five cents. The popularity of this mode of conveyance is rapidly gaining ground. It has been definitely adopted in many of the large cities of the Union. The immense and wealthy omnibus interest in New York is loth to give way to it, but will be compelled to yield ere long. Our staid, conservative English friends are gracefully yielding to the innovation, and "that enterprising Yankee," Train, having laid his "tracks" and the foundation of an immense fortune in Birkenhead, is introducing "his system" of city passenger railways into London, and other large cities of the United Kingdom.

This, the latest development of city locomotion, being one that is not likely to be superseded very soon—though it will most probably speedily be modified, as regards its propelling power by the substitution of mechanical in place of animal force—we may with profit briefly discuss the general subject in a hygienic point of view.

Other things being equal, pedestrian locomotion has undoubtedly many and great advantages on the score of health over any other form. It offers the advantage of the essentials, exercise of body and mind, and exposure to the sun and air. But, on the other hand, the bodily exercise is not always well regulated, and the exposure, during hot weather, to the direct and especially the reflected rays on our sidewalks is often very prejudicial to health. There is one evil incident to city pedestrianism with us, which is operative at all seasons of the

year. It is *the too rapid expenditure of life-force for the purpose of economizing time—too rapid walking.* We see it every day, particularly on our principal business thoroughfares, and this rapidity of motion becomes intensified as we approach the sources of business vitality—the spinal centers of our cities—where the “money-changers” hold their seat of power. To look down from an elevated position on Chestnut or Third street, Broadway or Wall street, or Washington or State street, forcibly reminds one—bating the confusion of opposing currents—of the capillary circulation as seen under the field of the microscope. This rapid walking, especially when it has a full or an empty stomach, a burdened, troubled mind, and exposure to a hot sun as concomitants, lays the foundation of many diseases, and tends materially to shorten life. But, with our improved modes of conveyance, and the cheap rates of fare on our omnibuses and city railways, there is no doubt that many persons ride when it is entirely unnecessary, and the exercise of moderate walking is really essential to health.

Our commodious, comfortable city cars offer peculiarly strong temptations in this respect. To take a well-cushioned seat in a vehicle that glides along so smoothly and quietly as to almost cause one to forget that he is in motion, and to step out of one's own door or place of business, and all with the least possible exertion, and in a space of time that has scarcely afforded opportunity to exchange the compliments of the day with a friend, or to look at the stock and market quotations, or the telegraphic news in the morning or evening paper, is all very well for speed, comfort, and convenience, but it affords no opportunity at all for exercise. And then, these are the light lines in the picture; there are some shades which have not yet been drawn—and, indeed, sometimes the picture is all shade. There is often want of ventilation, which is especially felt when cars are over-crowded, some of our conductors seeming to regard their cars as travelers do their carpet-bags—incapable of being filled. Under these circumstances, passengers, particularly men, are often compelled to stand instead of sit, and sometimes in very uncomfortable and exposed positions. The air of the car be-

comes redolent of all kinds of odors, from the handkerchief-perfume of the belle to the bad whisky and bad tobacco-breath of the roué, mingled with the stifling dust of old hay and straw which every movement of the feet raises in clouds from the bottom of the car. These positive influences must be added to the negative one of lack of exercise in making up our estimate of the hygienic influence of our city passenger rail-cars. An advantage that must not be lost sight of, consists in the fact that this mode of conveyance gives our business population the opportunity of going out to the suburban sections of our cities to live, where they have the advantage of cheaper rents, more commodious houses, gardens, open lots, and fresh air, and if they will embrace the opportunity to work in their gardens, or otherwise take active exercise, the adverse hygienic influences they sometimes encounter in the cars, will be much more than counterbalanced.

A little more attention to the comfort and wants of passengers on the part of our railway companies, an enforcement of the rule to *stop* until passengers fairly get in and out of the car, more care to ensure proper ventilation, the use of mats on the floor of the car, which should be changed every trip, and care not to have cars over-crowded, would make these vehicles add to rather than detract from the hygienic features of city life.

#### DUTIES OF THE MILITARY SURGEON: HAVOC OF WAR.

There are no human calamities so little comprehended as those of war. Its pomp and circumstance make more impression than its attendant horrors. There seems to be a poetry in the conflict of arms, which glosses over and conceals beneath a mask of romance its real frowning face of tragedy.

War is popularly associated only with deeds of chivalry, and the march of sturdy men to the sounds of martial music and with flaunting banners; or, at the worst, with a glorious death on the battle-field. The invariable attendants of crowded hospitals, generating pestilence, reeking with stench of foul sores and exhausting wounds, and made ghastly by the wasted forms of soldiers, dying, or but lingering for a

final release from suffering—all these form another tragedy, but which is played behind the scenes. Dead men tell no tales, and the sick are away from the public view.

This terrible finale of strife is the act of the drama in which the medical man plays his part. It is not strange, then, that his view of war should be a sad one. From no source can we get such an appreciation of the miseries of a campaign as from its medical history. Larrey's memoir of Napoleon's wars is the only history which gives a real account of their dreadful ravages.

The immense duty of military surgery after a great conflict, may be illustrated by the battle near Moscow. At this battle, where there were between five and six hundred thousand combatants engaged, of whom thirty-three thousand were killed or wounded, Larrey performed more than two hundred amputations during the succeeding twenty-four hours. In this single attack about eighty generals were killed, including those in both armies. Larrey says that the battle was opened by the simultaneous discharge of *two thousand pieces of artillery*.

As an illustration of the innumerable wounds inflicted, it may be mentioned that Larrey reports that at the military hospital near Dresden he visited two thousand six hundred and thirty-two, who were wounded *in the hands alone*.

The almost entire destruction of Napoleon's army, from cold and hunger, on the fatal retreat from Russia, and the annihilation, many years previously, of an entire division of the army of Charles XII., from the same causes, and on almost the same track, are instances of great loss of life in war, from other influences than wounds or pestilence.

Napoleon's wars are said to have destroyed six millions of lives. As instances of the slaughter at some of the most important battles, it is estimated that at Borodino eighty thousand were slain; at Waterloo, seventy thousand; at Eylau, sixty thousand; at Austerlitz, thirty thousand. Other great battles are recorded which were still more fatal. At Fontenoy one hundred thousand were killed; at Arbela, three hundred thousand; at Chalons, more than three hundred thousand.

In the battles of Julius Cæsar, four hundred

thousand Usipetes were slain in one, and in another four hundred and thirty thousand Germans.

The army of Xerxes amounted to 5,283,320; and, if the attendants were only one-third as great as common at the present day in Eastern countries, the sum total must have reached nearly six millions. Yet, in one year, this vast multitude was reduced, though not entirely by death, to three hundred thousand fighting men; and of these only three thousand escaped destruction. Jenghis-khan, the terrible ravager of Asia in the thirteenth century, shot ninety thousand on the plains of Nessa, and massacred two hundred thousand at the storming of Kharasm. In the district of Herat, he butchered one million six hundred thousand, and in two cities, with their dependencies, one million seven hundred and sixty-two thousand. During the last twenty-seven years of his long reign, he is said to have massacred more than half a million every year; and in the first fourteen years, he is supposed, by Chinese historians, to have destroyed not less than eighteen millions; a sum total of over thirty-two millions in forty-one years.

At the siege of Londonderry, more than fifteen thousand were killed; in that of Paris, in the sixteenth century, thirty thousand victims of mere hunger; in that of Malplaquet, thirty-four thousand soldiers alone; in that of Ismail, forty thousand; of Vienna, seventy thousand; of Ostend, one hundred and twenty thousand; of Mexico, one hundred and fifty thousand; of Acre, three hundred thousand; of Carthage, seven hundred thousand; of Jerusalem, one million.

The Spaniards are said to have destroyed, in forty-two years, more than twelve millions of American Indians. Grecian wars sacrificed fifteen millions; Jewish wars, twenty-five millions; the wars of the twelve Cæsars, in all, thirty millions; the wars of the Romans, before Julius Cæsar, sixty millions; the wars of the Roman Empire, of the Saracens and the Turks, sixty millions each; those of the Tartars, eighty millions; those of Africa, one hundred millions.

Although the weapons used in modern battles have been much more destructive than



were those of ancient times, the resources of medical science have done much to lessen the mortality of war. From hemorrhage alone, a vast number must have died in antique battles, as wounds were then more of the incised character than at present, and the means of arresting the flow of blood were unknown. Pestilence was more fatal then, as in the Holy Wars, than it has been in modern times. The cruelty of the victors, who went over the field killing the wounded, added much also to the number of dead.

#### ALLEGED DEATHS FROM INHALATION OF SULPHURIC ETHER.

The following circular from Dr. Hodges, intended to correct a misapprehension, is commended to the notice of our readers. We trust that every facility will be afforded the committee in the prosecution of their inquiries on this important subject:

"Boston, May, 1861.

"The undersigned, Chairman of the committee appointed by the Medical Improvement Society of this city to investigate alleged deaths from the inhalation of sulphuric ether, desires to assure the profession that the investigations of that committee are not of a partisan character, and have no relation whatsoever to the so-called "Ether Controversy." As an impression exists at a distance from here that the circulars which have been so largely distributed by them have some connection, either antagonistic or friendly, with the measures at present being taken in favor of Dr. W. T. G. Morton, this denial will, it is hoped, suffice to convince those gentlemen to whom they have been addressed, that no ulterior motive is concealed, and that no use, other than that stated in the circular, viz: to prove or disprove the absolute safety of inhaling pure sulphuric ether, will be made of their replies.

"R. M. HODGES, M.D."

"*Nobody Hurt!*"—The official report of Surgeon-General Gibbes, of the South Carolina forces, concerning the attack on Fort Sumter, is published in the Charleston papers. It is dated April 16. He says: "I have the unexampled privilege of stating that no serious casualty has occurred during the vigorous action of thirty-three hours of reducing Fort Sumter. Four trifling contusions are reported at Fort Moultrie, but none at other posts, and it is a subject of extreme gratification that even in the management of heavy ordnance by new recruits and volunteers, no accident to life or limb has occurred."

It will be remembered that there was no loss of life either in Fort Sumter. This is one of the most remarkable facts on military record.

#### NEWS AND MISCELLANY.

*Surgeon-General of Pennsylvania.*—The Legislature of Pennsylvania has passed an act authorizing the Governor to organize a volunteer force of fifteen regiments, and modify the military forces of the State. The medical organization is to be regulated by the act, as follows:

"Section 5. The chief of each staff department shall, under the direction of the Governor, have command over all subordinate officers in his department, and shall, from time to time, issue orders and instructions for their government and practice.

"Section 10. That there shall be a hospital department, which shall be supervised by the Surgeon-General, who shall be a member of the grand staff, with the rank of colonel; and, to each division, when in actual service, there shall be a hospital surgeon, with the rank of major; and to each brigade, when in actual service, a hospital surgeon, with the rank of captain—said officers to be appointed and commissioned by the Governor, and, except the Surgeon-General, to be first examined and recommended for appointment by the Surgeon-General, and a board of such other surgeons, not exceeding three, as he may direct. The rank of all said officers shall not entitle them to promotion in the line, nor shall it regulate their pay and rations, except when in actual service, under a requisition from the President of the United States, or the proclamation of the Governor; and all the surgeons and surgeons' mates, now or hereafter to be appointed, shall be examined by the Surgeon-General and a board of surgeons, not exceeding three, as he may direct, and the qualifications and fitness of all surgeons, and applications for appointment as such, shall be reported, in writing, to the Governor."

Under this law, the Surgeon-General becomes a most important office, and much of the efficiency of the organization will depend on his energy and judgment. The provision for the examination of all candidates for medical appointments is just what it should be, and must exercise a valuable influence on the welfare and efficiency of the troops.

The Governor of the State has, in accordance with the above sections of the act, appointed Professor Henry H. Smith, of the University of Pennsylvania, to the office of Surgeon-General. The selection of this gentleman for that responsible station will be universally satisfactory. His eminent position in the profession, and his systematic business habits, will insure high administrative ability at the head of the department.

The irregular and indiscriminate manner in which surgeons to the volunteer forces in this State have heretofore been appointed, has been discreditable to the authorities, and will prove

a misfortune to the troops. The present organization of the department will render it equal to the medical staff of the regular army.

*Pennsylvania State Medical Society.*—We would call the attention of our readers to the following circular:

*Philadelphia, May 18, 1861.*

The Committee of Arrangements of the Medical Society of the State of Pennsylvania, after consultation with members of the profession in all parts of the State, has concluded that it will be inexpedient, in view of the unusual circumstances of the present season, to hold the proposed meeting at Pittsburg this year. With the approval of the officers of the Society, therefore, the Committee deems it right to announce the postponement of the Convention of the Society; to meet at the same time and place, next year.

It is desirable that information of this postponement should be extended as far as possible among the members of the different County Medical Societies.

H. E. DRAYTON,  
JOS. CARSON,  
WM. MAYBURY,  
A. NEBINGER,  
H. HARTSHORNE,  
*Committee.*

*Medical Association of the State of Georgia.*—The annual meeting of this association took place at Atlanta on the 10th and 11th of April. According to the minutes published in the *Atlanta Medical and Surgical Journal*, there were forty-eight members present, one half of whom lived in Atlanta.

Dr. Banks, of Griffin, was chosen President. Drs. Alexander, of Atlanta, and Taliaferro, of Columbus, Vice-Presidents, and Dr. A. G. Thomas, of Atlanta, Secretary. Dr. Taliaferro, of Columbus, presented an interesting report on typhoid fever, which is published in the current number of the *Atlanta Journal*. Dr. Means delivered the annual address.

A committee, of which Dr. Logan was chairman, "On the Relations of this Association with the American Medical Association," presented a preamble and resolutions, of which the following is the fourth and final:

"Resolved, That in accordance with the foregoing preamble and resolutions this association will be no longer represented in the American Medical Association, and hereby declare its complete and final separation from that body."

In accordance with another resolution the other Southern States are invited to unite in the formation of a new Medical Association for the South.

A series of important resolutions on the registration of births, marriages, and deaths was adopted, and it was made the duty of the officers of the meeting to bring the subject before the State Legislature.

*Foundling Hospitals.*—In the year 1855, 1,334 infants were left at the Orphan Asylum of Oporto; of these, no less than 368 died (195 boys and 173 girls.) 58 died of the thrush, 27 of marasmus, 25 of dysentery, 24 of weakness, 29 of epidemic cholera, 17 of syphilis, 16 of jaundice, 14 of anasarca, 11 of ophthalmia with dysentery, 10 of choleraic diarrhoea, 9 of eclampsia, etc. As to the age of these infants, it is observed that 205 died within the first month, 31 within the second, 16 within the third, and 5 within the fourth; the numbers gradually diminishing to the twelfth month.—*Dublin Medical Press.*

Dr. Juriah Harriss retires from the editorial management of the *Savannah Journal of Medicine*, and Dr. A. B. Tucker takes his place. Dr. R. D. Arnold is associated with Dr. Tucker. The work is changed from the bi-monthly to the monthly form.

#### Answers to Correspondents.

*Dr. W. J., N. Y.*—The last edition of the U. S. Dispensary was published in 1858, and was the eleventh. The next edition will undoubtedly be enriched by Dr. Wood's observations on subjects connected with materia medica and therapeutics during his protracted absence in Europe.

*Dr. O. C. G., N. Y.*—Your article was received. It was not published, because we did not think the game worth the bagging. Our policy toward all irregulars, is to give them as little notoriety as possible. That is what they live on.

*Dr. W. V., Pa.*—Vaccine matter received. More will be acceptable, as we are having constant applications for it. We supply our subscribers simply as a matter of accommodation.

#### Communications Received.

*Connecticut*—Dr. C. H. Pendleton, with encl. *Delaware*—Dr. J. A. Draper. *Illinois*—Dr. J. A. Brown, with encl.; Dr. W. McKnight. *Massachusetts*—Dr. R. M. Hodges. *New Jersey*—Dr. W. Johnson; Dr. J. H. Pugh. *North Carolina*—Dr. L. W. Martin. *New York*—Dr. P. Barnes, with encl.; Dr. G. K. Smith; Bailliere Bros., with encl., for Dr. Peters; Dr. L. Bauer. *Ohio*—Dr. W. P. Spurgeon, with encl.; Dr. S. Bonner; W. S. Merrill & Co., with encl.; Dr. Q. P. Walker; Dr. J. W. Vauce. *Pennsylvania*—Dr. T. B. Cooper; Dr. A. P. Dutcher; Dr. W. Voss, (2); Dr. J. W. Eldred, with encl.; Dr. H. F. Martin; Dr. S. A. Robinson; Dr. W. H. Harris, with encl.; Dr. A. M. Sigmond, with encl. *Rhode Island*—J. G. White; Dr. S. S. Drury, with encl.; Dr. L. W. Briggs, with encl.; Dr. S. A. Martin, with encl.; Dr. J. J. Ellis, with encl.; Dr. O. Bullock, with encl.; Dr. D. W. Murchant, with encl.; Dr. W. Cook, with encl.; Dr. W. H. Green, with encl.; Dr. R. H. Rice, with encl.; Dr. N. Green, with encl.; Dr. D. King, with encl.; Dr. A. R. Davenport, with encl.; Dr. T. A. Hazard, with encl.; Dr. J. D. Walsh, with encl.

*Office Payments.*—Dr. J. R. Levan, Pa.; Dr. John Flynn, M. Swift. By Mr. Hulme, N. J.: Drs. A. A. Howell, L. Jemison, G. R. Bartholomew, S. Gulick, S. E. Freeman, A. Tregonowan, J. G. Shackleton, E. Taylor, T. G. Chattle, W. S. Kimball, and C. A. Vandaveer. By Mr. Swain: Drs. Sharp, C. J. Nice, Bean, J. Flynn, Schmalz, Beaumont, and Dr. McClenahan, (adv.)